REMARKS

Claims 1-9 are pending in this application. Claims 1, 2 and 4-6 have been rejected under 35 U.S.C. § 102. Claims 7-9 have been rejected under 35 U.S.C. § 103. Claim 8 has also been rejected under 35 U.S.C. § 112. Claim 3 and the drawings have been objected to. Claims 1 and 6-8, the specification and the drawings have been amended. Claims 10-16 have been added. No new matter has been added. Reconsideration is respectfully requested.

The Examiner has objected to the drawings as failing to comply with 37 C.F.R. 1.84(p)(4). The Examiner notes that, in figure 1, reference characters 204, 219, 220 and 221 have all been used to designate the liquid crystal layer. Accordingly, Applicant has amended figure 1 such that reference character 204 designates the liquid crystal layer (see specification page 7, lines 18-21), reference character 219 designates the gap formed between the tow opposing substrates 201 and 216 (see specification, page 7, lines 18-21), and reference characters 220 and 221 designate pixel regions (see specification page 6, lines 13-14).

The Examiner also notes that reference characters 202 and 208 are not defined in the specification, and reference character 213 does not point to anything. Accordingly, Applicant has amended the specification to describe elements 202 and 208 which are self evident from the drawings and the context of the written description as a whole. No new matter has been added. Also, it is proposed to amend Figure 1 to show that the reference character 213 points to the amorphous silicon.

Lastly, a statement regarding the numbering commonality of all the figures has been included in the specification.

The Examiner has rejected claim 8 under 35 U.S.C. § 112, stating that there is insufficient antecedent basis for the limitation "said transparent electrode." Applicant has amended claim 8 such that all limitations now have proper antecedent basis.

The Examiner has rejected claim 1 under 35 U.S.C. § 102(e) as being anticipated by *Kurauchi, et al.*, 35 U.S. Patent No. 5,917,572. This rejection is respectfully traversed.

Applicant's claim 1 recites a liquid crystal display panel comprising, *inter alia*, a columnar spacer formed and disposed on a portion of a surface of a multi-layered film, said portion of said multi-layered film having little variation in thickness. This limitation is not disclosed or suggested in *Kurauchi*. *Kurauchi* is directed toward a liquid crystal display device including spacers that are constructed of stacked color filter layers. In *Kurauchi*, a spacer is constructed of stacked color layers constituting color filters and is disposed in such a position as to exhibit a high dielectric breakdown strength on an active matrix substrate (*Kurauchi*, column 2, lines 40-46.) Spacers formed in the manner disclosed in *Kurauchi* tend to worsen the uniformity of the gap between panel surfaces due to the large variation in film thickness. The deficiencies of the *Kurauchi* invention are cited by Applicant on page 3 of the specification as originally filed. *Kurauchi* does not disclose or suggest forming columnar spacers in a portion of the multi-layered film having little variation in thickness as claimed by Applicant.

The Examiner has also rejected claims 1, 2, and 4-6 under 35 U.S.C. § 102(b) as being anticipated by *Miazaki et al.*, U.S. Patent No. 5,757,451. This rejection is respectfully traversed.

Miazaki is directed toward a liquid crystal display device having spaces formed from stacked color layers. The spacers formed in Miazaki suffer from the same variation in film thickness and the corresponding non-uniformity of the gap between panel surfaces as those of *Kurauchi*. As with *Kurauchi*, *Miazaki* does not disclose or suggest a liquid crystal display panel comprising, *inter alia*, a columnar spacer formed and disposed on a portion of a surface of a multi-layered film, having little variation in thickness. Thus, *Miazaki* does not anticipate claims 1, 2, and 4-6 for the same reasons as *Kurauchi*.

The Examiner has also rejected claims 7-9 under 35 U.S.C. § 103(a) as being unpatentable over *Miazaki*. This rejection is respectfully traversed.

Applicant's claims 7 and 8 recite a method for manufacturing a liquid crystal display panel comprising, *inter alia*, forming a columnar spacer in a part of contract holes provided on said pixel regions. As disclosed in the specification as originally filed, the contact holes have the least variation in film thickness in the pixel parts. As stated

previously, there is no disclosure or suggestion in *Miazaki* of forming a columnar spacer in the contact holes. Thus, *Miazaki* does not disclose or suggest all of the elements of claims 7-9 and, therefore, a *prima facie* case of obviousness has not been met. Accordingly, Applicant's claims 7-9 are not obvious in view of *Miazaki.*

Claims 10-16 have been added to further claim embodiments of Applicant's invention. Claims 10-16 find support in the specification as originally filed at, *inter alia*, page 9, lines 9-11; page 11, lines 13-20; and page 11, line 27 to page 12, line 29. No new matter has been added. Claim 10-16 are believed to be allowable over the prior art cited for the same reasons as Claims 1-8. Accordingly, allowance of Claims 1-16 at an earliest possible date is earnestly solicited.

Respectfully submitted,

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By _____

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Atty. Dkt. No. 048369-0117

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant: Yuji YAMAMOTO et al.

Title: LIQUID-CRYSTAL DISPLAY PANEL AND METHOD FOR MANUFACTURING SAME

Appl. No.: 09/594,721

Filing Date: 06/16/2000

Examiner: T. Rude

Art Unit: 2871

Marked-Up Version of Amendment and Request for Reconsideration

Under 37 C.F.R. § 1.111

Commissioner for Patents
Box NON-FEE AMENDMENT
Washington, D.C. 20231

Sir:

This communication is responsive to the Office Action dated February 6, 2002, concerning the above-referenced patent application.

In the Specification:

Please replace the paragraph beginning at page 5, line 22 with the following:

Detailed embodiments of a liquid-crystal display panel and a method for manufacturing a liquid-crystal display panel according to the present invention are described in detail below, with references being made to relevant accompanying drawings. In the drawings, like numbers refer to like elements.

On page 6, after line 5, insert the following new paragraph:

The reference number 202 denotes a common transparent electrode attached to the glass substrate 201, and the reference number 208 denotes an insulation film attached to the insulation film 209.

In the Claims:

Please amend the following claims:

1. (Amended) A liquid-crystal display panel comprising:

a plurality of pixels; and

a columnar spacer formed and disposed on a portion of a surface of a multi-layered film~~s~~, said films formed on a surface of a substrate facing ~~to~~ a transparent electrode provided in at ~~leaset~~ least a part of pixels among a plurality of pixel portions forming a liquid-crystal display panel, ~~and~~ said portion of said multi-layered film having little variation in thickness.

6. (Amended) A liquid-crystal display panel according to claim 1, wherein ~~the~~ a type of said liquid-crystal display panel is one type selected from a group consisting of a color type and a monochrome type.

7. (Amended) A method for manufacuring a liquid-crystal display panel comprising:

forming in each of a plurality of pixel regions on a substrate a color film, a signal electrode, a gate electrode, and a pixel electrode;

forming a transparent electrode film thereover;

~~then~~ forming a columnar spacer on said transparent electrode film ~~minimally~~ in a part of contact holes provided on said pixel regions; and

~~then~~ disposing an opposing substrate on which is formed an opposing common transparent electrode so as to oppose said transparent electrode film.

8. (Amended) A method for manufacturing a liquid-crystal display panel comprising:

forming in each of a plurality of pixel regions on a substrate a color film, a signal electrode, a gate electrode, and a pixel electrode;

~~then~~ forming a columnar spacer ~~on said transparent electrode film minimally~~ in a part of contact holes provided on said pixel regions;

forming a transparent electrode film on said color film, signal electrode, gate electrode, and pixel electrode, with the exception of said columnar spacer; and

~~then~~ disposing an opposing substrate on which is formed an opposing common transparent electrode so as to oppose said transparent electrode film, with ~~intreposing~~ interposing said columnar spacer therebetween.